

The present application includes fifteen independent apparatus Claims 1, 13, 20, 28, 29, 30, 32, 34, 35, 36, 37, 38, 79, 80 and 84 (as well as fifteen corresponding method Claims 40, 52, 59, 67, 68, 69, 71, 73, 74, 75, 76, 77, 85, 86 and 90), which recite different features related to different aspects of the present invention. However, the outstanding Office Action states these different claims are obvious over the same disclosure of the same reference.

Despite Applicants' previous argument on this point, the outstanding Office Action is a mere copy of the rejections from the previous Office Action in sections 1-16, and completely fails to address this point in the remarks of sections 17-28.

Moreover, the remarks of sections 17-28 only address our previous arguments against Keshav for Claims 1, 13, 29, 34, 36, 80 and 84. Our previous arguments for Claims 20, 28, 30, 32, 35, 37, 38 and 79 have not been addressed.

Thus, Applicants cannot understand the outstanding Office Action's reason for rejecting the independent claims other than Claim 1.

More specifically, regarding independent Claim 13, the outstanding Office Action merely states that Claim 13 is rejected by the same rationale as Claim 1, despite that Claim 13 recites features different from Claim 1. Namely, Claim 13 recites a receiving unit which receives a control message header information and information regarding a channel. Such a control message is not recited in Claim 1, so the outstanding Office Action's rationale that the claimed receiving unit is obvious from Keshav is improper.

Claim 13 also recites a commanding unit which commands the receiving node to receive the data that has the header information or that is transferred through the channel, using a protocol depending on the first physical network. This commanding unit is different from the commanding unit of Claim 1, which commands the transmitting node using a

protocol depending on the second physical network. Thus, the outstanding Office Action's rationale that the claimed commanding unit is obvious from Keshav is also improper.

In addition, note Claim 1 is directed to a data transfer control on the second physical network side, while Claim 13 is directed to a data transfer control on the first physical network side. Thus, it is improper to reject Claims 1 and 13 for the same reasons.

Regarding independent Claim 20, the outstanding Office Action merely states Claim 20 is rejected by the same rationale as Claim 4, even though Claim 20 recites features different from Claim 4.

Namely, Claim 20 recites a transfer unit that transfers data transmitted through the reserved communication path to the channel established by the establishing unit, and a commanding unit for commanding the receiving node to receive data transferred through this channel, using a protocol depending on the first physical network. The transfer unit and commanding unit are not recited in Claim 4 or its base Claims 1 and 3. Thus, the outstanding Office Action's rationale that the claimed transfer unit and the claimed commanding unit is obvious from Keshav is improper.

In addition, note Claim 20 is also directed to a data transfer control on the first physical network side, while Claim 4 (which is dependent on Claim 1) is directed to a data transfer control on the second physical network side. Thus, the outstanding Office Action's rationale for rejecting Claims 4 and 20 for the same reason is improper.

Regarding independent Claim 28, the Outstanding Office Action merely states Claim 28 is rejected by the same rationale as Claim 5, even though Claim 28 recites features different from Claim 5.

Namely, Claim 28 recites a second establishing unit for establishing a communication path between the data transfer control device and the first physical network or a transmitting node. This feature is not recited in Claim 5 or its base Claims 1 and 3. Thus, the outstanding Office Action's rationale the claimed second establishing unit is obvious from Keshav is improper.

Claim 28 also recites a commanding unit for commanding the receiving node to receive data transferred through the channel established by the first establishing unit, using a protocol depending on the second physical network. Note the receiving node is connected to the second physical network in Claim 28, unlike Claim 1. This feature is not recited in Claim 5 or its base Claims 1 and 3 (a commanding to the receiving node is not recited in Claims 1, 3 and 5). Thus, the outstanding Office Action's rationale that the claimed commanding unit is obvious from Keshav is improper.

Claim 28 also recites a conversion unit which converts data format from a first format depending on the third physical network or the first physical network and/or an upper logical network of the third physical network or the first physical network, into a second format depending on the second physical network. In contrast, Claim 5 recites a conversion unit which converts a data format from a first format depending on the second physical network, into a second format depending on the third physical network or the first physical network and/or an upper logical network of the third physical network or the first physical network. In other words, the conversion recited in Claim 28 is reserve of the conversion recited in Claim 5 and therefore the claims are quite different. Thus, the outstanding Office Action's rationale that the claimed conversion unit is obvious from Keshav is improper.

Claim 28 also recites a transfer unit for transferring format converted data to the

channel established by the first establishing unit. In contrast, in Claim 5, the format converted data is transmitted to the third physical network or the first physical network through a channel indicated by the control message or after attaching the header information, but not to a channel established by the establishing unit. Thus, the outstanding Office Action's rationale that the claimed transfer unit is obvious from Keshav is improper.

In addition, note Claim 28 is directed to a data transfer control on the second physical network side, but in Claim 28, the second physical network is a network to which a receiving node is connected, whereas Claim 1 is directed to a data transfer control on a network to which the transmitting node is connected. Thus, the outstanding Office Action's rationale for rejecting Claims 5 and 28 for the same reason is improper.

Regarding independent Claim 29, the outstanding Office Action merely states the claimed second establishing unit is disclosed in col. 7, lines 12-17 of Keshav, even though Claim 29 recites features not recited in Claim 1.

Namely, Claim 29 recites a commanding unit for commanding the receiving node to receive data through the channel established by the first establishing unit, using a protocol depending on the second physical network. Note the receiving node is connected to the second physical network in Claim 29, unlike Claim 1. As already noted above, a commanding to the receiving node is not recited in Claim 1. Thus, the outstanding Office Action's rationale that the claimed commanding unit is obvious from Keshav is improper.

Claim 29 also recites an encoding/decoding unit which is not recited in any other claim. Therefore, the outstanding Office Action's rationale that the claimed encoding/decoding unit as obvious from Keshav is improper.

Further, Claim 29 also recites a transfer unit for transferring encoded/decoded data to

the channel established by the first establishing unit, which is also not recited in any other claim. Thus, the outstanding Office Action's rationale that the claimed transfer unit is obvious from Keshav is improper.

Note Claim 29 is also directed to a data transfer control on the second physical network side, but in Claim 29, the second physical network is a network to which the receiving node is connected, whereas Claim 1 is directed to a data transfer control on a network to which the transmitting node is connected. Thus, the outstanding Office Action's rationale to reject Claims 1 and 29 for the same reason is improper.

Regarding independent Claim 30, the outstanding Office Action merely states Claim 30 is rejected by the same rationale as Claim 1, even though Claim 30 recites features different from Claim 1.

Namely, Claim 30 recites an establishing unit for establishing a communication path using a signaling protocol of a network layer. Claim 30 also recites a receiving unit for receiving a control message, and a commanding unit for commanding the receiving node. These features are not recited in Claim 1, so the outstanding Office Action's rationale that the claimed establishing unit, receiving unit, and commanding unit is obvious from Keshav is improper.

In addition, note Claim 30 is directed to a data transfer control on the first physical network side, but in Claim 30, the first physical network is a network to which the receiving node is connected, whereas Claim 1 is directed to a data transfer control on a network to which the transmitting node is connected. Thus, it is improper to reject Claims 1 and 30 for the same reasons.

Regarding independent Claim 32, the outstanding Office Action merely states Claim

32 is rejected by the same rationale as Claim 1, even though Claim 32 recites features different from Claim 1.

Namely, Claim 32 recites an establishing unit for established a communication path using a signaling protocol of a network layer, and a transmission unit for transmitting a control message. These features are not recited in Claim 1. Thus, the outstanding Office Action's rationale that the claimed establishing unit and transmission unit is obvious from Keshav is improper.

In addition, note Claim 32 is directed to a data transfer control on the first physical network side, which is a network to which the transmitting node is connected, similarly as in Claim 1, but these claims include different features so it is improper to reject Claims 1 and 32 for the same reason.

Regarding independent Claim 34, the outstanding Office Action merely states Claim 34 is rejected by the same rationale as Claim 29, even though Claim 34 recites features different from Claim 29.

Namely, Claim 34 recites a second establishing unit for establishing a communication path by exchanging a signaling protocol of a network layer, which is different from the second establishing unit of Claim 29. Claim 34 also recites a transmission unit for transmitting a control message. These features are not recited in Claim 29 so the outstanding Office Action's rationale that the claimed second establishing unit and transmission unit is obvious from Keshav is improper.

In addition, note Claim 34 is also directed to a relay device, which is different from a data transfer control device to which Claim 29 is directed. Thus, it is improper to reject Claims 29 and 34 for the same reason.

Regarding independent Claim 35, the outstanding Office Action merely states Claim 35 is rejected by the same rationale as Claim 2, even though Claim 35 recites features different from Claim 2.

Namely, Claim 35 recites a reception unit for receiving a control message, and an establishing unit for establishing a communication path by exchanging a signaling protocol of a network layer, which is different from an establishing unit of Claim 1 (which is the base claim of Claim 2). These features are not recited in Claim 2 so the outstanding Office Action's rationale that the claimed reception unit and establishing unit is obvious from Keshav is improper.

In addition, note Claim 35 is also directed to a relay device, which is different from a data transfer control device to which Claim 2 is directed, so it is improper to reject Claims 2 and 35 for the same reason.

Regarding independent Claim 36, the outstanding Office Action merely states Claim 36 is rejected by the same rationale as Claim 5, even though Claim 38 recites features different from Claim 5.

Namely, Claim 36 recites a receiving unit for receiving a control message, and a transmission unit which converts the data format of the received data according to the control message, which is different from the conversion unit of Claim 5. These features are not recited in Claim 5 so the outstanding Office Action's rationale that the claimed receiving unit and transmission unit is obvious from Keshav is improper.

Note Claim 36 is also directed to a relay device, which is different from a data transfer control device to which Claim 5 is directed. Thus, it is improper to reject Claims 5 and 36 for the same reason.

Regarding independent Claim 37, the outstanding Office Action merely states Claim 37 is rejected by the same rationale as Claim 6, even though Claim 37 recites features different from Claim 6.

Namely, Claim 37 recites a receiving unit for receiving a control message, and a transmission unit which encodes or decodes the received data according to the control message, which is different from the encoding/decoding unit of Claim 6. These features are not recited in Claim 6 so the outstanding Office Action's rationale that the claimed receiving unit and transmission unit is obvious from Keshav is improper.

Note Claim 37 is also directed to a relay device, which is different from a data transfer control device to which Claim 6 is directed. Thus, it is improper to reject Claims 6 and 37 for the same reason.

Regarding independent Claim 38, the outstanding Office Action merely states Claim 38 is rejected by the same rationale as Claim 9, even though Claim 38 recites features different from Claim 9.

Namely, Claim 38 recites a collecting unit for collecting attribute information according to a protocol depending on the first physical network, and a notifying unit for notifying the attribute information according to a network layer protocol not depending on the first physical network, which are somewhat different from the collecting unit and the notifying unit of Claim 9.

Moreover, Claim 38 is directed to a control device connected to a first physical network, which is different from a data transfer control device connected to a second physical network to which Claim 9 is directed. Thus, it is improper to reject Claims 9 and 38 for the same reason.



Regarding independent Claim 79, the outstanding Office Action merely states Claim 79 is rejected by the same rationale as Claim 1, even though Claim 79 recites features different from Claim 1.

Namely, Claim 79 recites a control unit for controlling a data transfer, and a commanding unit for commanding the receiving node. These features are not recited in Claim 1 (as already noted above, a commanding to the receiving node is not recited in Claim 1). Thus, the outstanding Office Action's rationale that the claimed control unit and commanding unit is obvious from Keshav is improper.

Note Claim 79 is directed to a data transfer control on the first physical network side, but in Claim 79, the first physical network is a network to which the receiving node is connected, whereas Claim 1 is directed to a data transfer control on a network to which the transmitting node is connected. Thus, it is improper to reject Claims 1 and 79 for the same reason.

Regarding independent Claim 80, the outstanding Office Action merely states Claim 80 is rejected by the same rationale as Claim 2, even though Claim 80 recites features different from Claim 2.

Namely, Claim 80 recites a commanding unit for notifying first and second identification information to a second communication device, and a request unit for requesting a transfer of the data flow to a third communication device. These features are not recited in Claim 2 or its base Claim 1. Therefore, the outstanding Office Action's rationale that the claimed commanding unit and request unit is obvious from Keshav is improper.

Note Claim 80 is directed to a communication device connected with a network of broadcast type, which is different from a data transfer control device to which Claim 2 is

directed. Therefore, it is improper to reject Claims 2 and 80 for the same reason.

Regarding independent Claim 84, the outstanding Office Action merely states the claimed second receiving unit is disclosed in col. 12, lines 54-58 of Keshav, even though the claimed second receiving unit is required to temporarily receive the specified data flow of the network layer, whereas Keshav only describes a decapsulation of the encapsulated packet, which is completely different.

Claim 84 also recites a first receiving unit for receiving a notification of a correspondence between a first identification information and a second identification information, which is not disclosed in Keshav and which is not recited in Claim 1, so the outstanding Office Action's rationale that the claimed first and second receiving units is obvious from Keshav is improper.

Note Claim 84 is also directed to a communication device connected with a network of broadcast type, which is different from a data transfer control device to which Claim 1 is directed. Thus, it is improper to reject Claims 1 and 84 for the same reason.

Based on the above comments, it is respectfully submitted the outstanding Office Action is deficient. Accordingly, it is requested the finality of the Office Action be withdrawn. In addition, it appears from the statements in the outstanding Office Action (as discussed above), the present invention is not clearly understood. Accordingly, the following comments are offered to clarify the claimed invention.

Claim 1 is directed to a data transfer control device on a network to which the transmitting node is connected, such as the 1st AV control terminal 2 shown in Fig 1 (see Fig 5 for its operation). In this data transfer control device, the establishing unit establishes a channel in the second physical network (1st 1394 bus 11), while the reserving unit reserves a

communication path for transferring data from this channel to another data transfer control device (2nd AV control terminal 5) or the receiving node (a) which is connected to the first physical network (2nd 1394 bus 12). Then, the commanding unit commands the transmission to the transmitting node (1), by using a protocol depending on the second physical network.

In this way, it is possible to carry out the data transfer to the receiving node even when the transmitting node connected to the second physical network only supports a protocol depending on the second physical network, regardless of the interconnected network environment up to the receiving node (see page 4, lines 23-29 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 13 is directed to a data transfer control device on a network to which a receiving node is connected, such as the 2nd AV control terminal 5 shown in Fig. 1 (see Fig. 5 for 1 is operation). In this data transfer control device, the receiving unit receives a control message, and the commanding unit commands the receiving node (6) to receive the information data which has the header information contained in that control message or which is transferred through the channel indicated by that control message, by using a protocol depending on the first physical network (2nd 1394 bus 12).

In this way, it is possible to realize the data transfer from the transmitting node even when the receiving node connected to the first physical network only supports a protocol depending on the first physical network, regardless of the interconnected network environment to the transmitting node (see page 11, lines 2-8 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 20 is also directed to a data transfer control device on a network to which a receiving node is connected, such as the 2nd AV control terminal 5 shown in Fig. 1 (see Fig. 5 for its operation). In this data transfer control device, the establishing unit establishes a channel in the first physical network (2nd 1394 bus 12), and the transfer unit transfers the information data that is transferred through a communication path reserved for receiving from the transmitting node (1) to the channel established by the establishing unit. Then, the commanding unit commands the receiving node (6) to receive the information data transferred through that channel, by using a protocol depending on the first physical network.

In this way, it is also possible to realize the data transfer from the transmitting node even when the receiving node connected to the first physical network only supports a protocol depending on the first physical network, regardless of the interconnected network environment up to the transmitting node (see page 14, lines 20-26 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 28 is directed to a data transfer control device on a network to which a receiving node is connected, such as the AV control terminal 1103 or 1503 shown in Fig. 9 or Fig. 13 (see Fig. 11, 15 or 17 for its operation). In this data transfer control device, the first establishing unit establishes a channel in the second physical network (1394 bus 1104 or 1504), and the second establishing unit establishes a communication path between the data transfer control device and the first physical network (Internet 1102 or ATM access network 1502) or the transmitting node (video server 1101 or 1501). Then, the commanding unit commands the receiving node (receiving terminal 1105 or 1505) to receive the information

data transferred through the channel established by the first establishing unit using a protocol depending on the second physical network, while the conversion unit converts the data format of the information data received through the communication path established by the second establishing unit, and the transfer unit transfers the format converted information data to the channel established by the first establishing unit.

In this way, it is possible to transfer the data in an appropriate format to the receiving node, by carrying out the data transfer to the channel after the transfer format conversion is carried out, even when the transfer format in the communication path on one physical network side is different from the transfer format in the communication path of another physical network or the upper logical network of that another physical network. In addition, it is possible for the data transfer control device to absorb the difference between the transfer format such as MPEG which is depending on the specific link layer technology such as ATM network or IEEE 1394 and the transfer format depending on the specific logical network such as MPEG-over-IP (see page 18, line 26 to page 19, line 5 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 29 is also directed to a data transfer control device on a network to which a receiving node is connected, such as the AV control terminal 1103 or 1503 shown in Fig. 9 or Fig. 13 (see Fig. 11, 15 or 17 for its operation). In this data transfer control device, the first establishing unit establishes a channel in the second physical network (1394 bus 1104 or 1504), and the second establishing unit establishes a communication path between the data transfer control device and the first physical network (Internet 1102 or ATM access network 1502) or the transmitting node (video server 1101 or 1501). Then, the commanding unit

commands the receiving node (receiving terminal 1105 or 1505) to receive the information data transferred through the channel established by the first establishing unit using a protocol depending on the second physical network, while the encoding/decoding unit encodes/decodes the data format of the information data received through the communication path established by the second establishing unit, and the transfer unit transfers the encoded/decoded information data to the channel established by the first establishing unit.

In this way, it is possible to transfer the data in an appropriate format to the receiving node, by carrying out the data transfer to the channel after the encoding or decoding of the data is carried out, even when the available communication resource amount in the communication path on one physical network side is different from the available communication resource amount in the communication path of another physical network or the upper logical network of that another physical network. In addition, it is possible to carry out the protocol conversion in a case where the transmitting node and the receiving node use different coding schemes (see page 19, line 28 to page 20, line 5 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 30 is directed to a data transfer control device on a network to which a receiving node is connected, such as the AV control terminal 2004 shown in Fig. 18 (see Fig. 19 for its operation). In this data transfer control device, the establishing unit establishes a communication path for the information data translated from the transmitting node (Internet 2011) by using a signaling protocol of a network layer, while the receiving unit receives a control message and the commanding unit commands the receiving node (video terminal 2005) to receive the information data transferred through the channel indicated by the control

message using a protocol depending on the first network to which the receiving node is connected.

In this way, even for the data input to a dedicated terminal of the network to which the data transfer control device is connected, which can only understand a protocol depending on that network, it is possible to realize the data transmission to that dedicated terminal with respect to the data from an arbitrary transmitting node of an arbitrary physical network in the interconnected environment by commanding the data reception from the established channel. In particular, in the Internet environment where the guarantee of the communication quality is made by the signaling protocol of the network layer such as RSVP or ST2, this is done by the data transfer control device so it is possible to receive the data with the communication quality guaranteed through the Internet environment, even when the data receiving terminal does not have the IP/RSVP/ST2 function (see page 20, line 25 to page 21, line 6 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 32 is directed to a data transfer control device on a network to which a transmitting node is connected, such as the AV control terminal 3002 shown in Fig. 23 (see Fig. 25 for its operation). In this data transfer control device, the establishing unit establishes a communication path for the information data transmitted from the transmitting node (transmitting terminal 3001) by using a signaling protocol of a network layer, while the transmitting unit transmits a control message and the commanding unit commands the transmitting node to transmit the information data to the channel indicated by the control message using a protocol depending on the first network to which the transmitting node is

connected.

In this way, even for the data transmission from dedicated terminal of the network to which the data transfer control device is connected, which can only understand a protocol depending on that network, it is possible to realize the data transmission from that dedicated terminal with respect to the data to an arbitrary receiving node of an arbitrary physical network in the interconnected environment by commanding the data transmission to the established channel. In particular, in the Internet environment where the guarantee of the communication quality is made by the signaling protocol of the network layer such as RSVP or ST2, this is done by the data transfer control device so it is possible to transfer the data with the communication quality guaranteed through the Internet environment, even when the data transmitting terminal does not have the IP/RSVP/ST2 function (see page 22, lines 5 to 22 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 34 is directed to a relay device, such as the 2nd half gateway 2003 shown in Fig. 18 (see Fig. 19 for its operation). In this relay device, the first establishing unit establishes a channel while the second establishing unit establishes a communication path that includes the channel established by the first establishing unit by exchanging a signaling protocol of a network layer with the data transfer control device (AV control terminal 2004), and the transmission unit transmits the control message containing information regarding that channel to the data transfer control device such that the data transfer control device commands the receiving node to receive the data transferred through the communication path established by the second establishing unit.



In this way, even for the data input to a dedicated terminal of the network to which the data transfer control device is connected, which can only understand a protocol depending on that network, it is possible to realize the data transmission to that dedicated terminal with respect to the data from an arbitrary transmitting node of an arbitrary physical network in the interconnected environment by commanding the data reception from the established channel.

Keshav completely fails to disclose any teaching for such a relay device.

Claim 35 is directed to a relay device, such as the 1st half gateway 3003 shown in Fig. 23 (see Fig. 25 for its operation). In this relay device, the reception unit receives a control message containing information regarding a channel from the data transfer control device (AV control terminal 3011), and the establishing unit establishes a communication path including that channel by exchanging a signaling protocol of a network layer with the data transfer control device.

In this way, even for the data transmission from a dedicated terminal of the network to which the data transfer control device is connected, which can only understand a protocol depending on that network, it is possible to realize the data transmission from that dedicated terminal with respect to the data to an arbitrary receiving node of an arbitrary physical network in the interconnected environment by commanding the data transmission to the established channel.

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 36 is directed to a relay device, such as the 2nd half gateway 2003 shown in Fig. 18 (see Fig. 19 for its operation). In this relay device, the receiving unit receives a control message requesting a conversion of a data format, and the transmission unit converts

the data format of the received data according to the control message and transmits to the converted data.

In this way, it is possible to resolve the data transmission impossibility due to the difference in the data format, as in a case where the receiving node cannot understand the data format of the data transferred up to this relay device such as MPEG-over-IP, by carrying out the format conversion at this relay device (see page 2, lines 11-19 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control device.

Claim 37 is directed to a relay device, such as the 1st half gateway 3003 shown in Fig. 23 (see Fig. 25 for its operation). In this relay device, the receiving unit receives a control message requesting an encoding/decoding, and the transmission unit encodes/decodes the data format of the received data according to the control message and transmits to the converted data.

In this way, it is possible to resolve the difference as in a case where the communication resource used by the data transferred up to the relay device is different from the communication resource permitted at the network of the receiving node side, by carrying out the encoding/decoding at this relay device. It is also possible to use this mechanism in such a manner that this relay device carries out the protocol conversion in a case where the coding scheme of the data transferred up to this relay device is different from the coding scheme of the data that can be understood by the receiving node (see page 94, to 30 to page 25, line 6 of the present specification).

Keshav completely fails to disclose any teaching for such a data transfer control

device.

Claim 38 is directed to a control device, such as the 1st or 2nd AV control terminal 2 or 5 shown in Fig. 1 (see Fig. 5 for its operation). In this control device, the collecting unit collects the attribute information of the transmitting or receiving nodes connected with the first physical network, and the notifying unit notifies the attribute information to a device connected with a second physical network according to a network layer protocol not depending on the first physical network.

In this way, it is possible to notify the attribute information of the information devices connected to the first physical network, independently from a protocol of the physical network, to the device connected with the second physical network, regardless of a type of the second physical network. It is also possible to urge the operations with respect to these information devices from the second physical network (see page 25, lines 17 to 25 of the present specification).

Keshav completely fails to disclose any teaching for such a control device.

Claim 79 is directed to a data transfer control device on a network to which the receiving node is connected, such as the control node 4104 shown in Fig. 26 (see Fig. 27 for its operation). In this data transfer control device, the control unit controls the transfer of the information data from a communication path reserved for receiving from the transmitting node (video server 4101) such that the information data are transferred to a channel in the first physical network (home network 4106), and the command unit commands the receiving node (terminal 4103) to receive the information data transferred through that channel.

In this way, even in a case where the receiving node connected with the first physical network cannot request transfer of the information data to the transmitting node (as in a case

where the receiving node only supports a datalink dependent protocol or a case where the receiving node has no information transmission function) it is possible to carry out the data transfer from the transmitting node regardless of an interconnected network environment up to the transmitting node (see page 26, line 28 to page 27, line 8 of the present specification).

Keshav completely falls to disclose any teaching for such a data transfer control device.

Claim 80 its directed to a communication device such as a connection device 4102 or the control node 4104 shown in Fig. 26 (see Fig. 27 and Fig. 30 for its operation). In this communication device, the commanding unit notifies the first identification information identifying resource for the second communication device (terminal 4103) and the second identification information identifying a data flow to be received and the request unit requests the transfer of the data flow in the network layer to a third communication device (video server 4101).

In this way, while this communication device carries out procedures for obtaining and maintaining arbitrary information with respect to the Internet, it is possible for the second communication device on the network of a broadcast type to receive desired data by having only a simple network layer flow receiving function. In addition, this communication device is capable of transmitting a data flow transfer request on behalf of the second communication device which is a receiving terminal so that even when the conventionally required information transmission function is omitted from the second communication device, it is still possible to specify transfer of arbitrary data flow to the second communication device through this communication device (see page 27, line 25 to page 28, line 27 of the present specification).

Keshav completely fails to disclose any teaching for such a communication device.

Claim 84 is directed to a communication device, such as a connection device 4102 or the control node 4104 shown in Fig. 26 (see Fig. 27 and Fig. 30 for its operation). In this communication device, the first receiving unit receives a notification of a correspondence between the first identification information identifying the specified data flow and the second identification information identifying the communication resource, and the second receiving unit temporarily receives the specified data flow of the network layer by using the communication resource, when the destination network layer address of the data flow is a network address temporarily assigned to the communication device.

In this way, while this communication device carries out procedures for obtaining and maintaining arbitrary information with respect to the Internet, it is possible for this communication device on the network of broadcast type to receive desired data by having only a simple network layer flow receiving function (see page 30, line 1 to page 31, line 4 of the present specification).

Keshav completely fails to disclose any teaching for such a communication device.

The following are arguments further distinguishing Claim 1 over Keshav.

The outstanding Office Action states the claimed establishing unit is disclosed in col. 10, lines 26-29 of Keshav. However, the claimed establishing unit is required to establish a channel in the second physical network to which the transmitting node is connected.

In contrast, col. 10, lines 26-29 of Keshav merely describe a client connection routine to be used by a processing system such as the application program A 400 to obtain a virtual circuit with a desired remote connection oriented server program which may be located on a device linked to the ATM network 300 or the Internet 310. This section of Keshav does not

disclose an element of the data transfer control device connected with transmitting node, that establishes a channel in a network to which the transmitting node is connected.

The outstanding Office Action states in section 18 that either or both the client or the server can interchange roles as the first or second physical networks, respectively, since communications is in both directions. Applicants argue, however, regardless of whichever is identified with the transmitting side, Keshav discloses no element like the claimed establishing unit that constitutes the data transfer control device connected with the transmitting node. The outstanding Office Action still fails to point out precisely which device disclosed in Keshav is equivalent to the data transfer control device and which element disclosed in Keshav is equivalent to the claimed establishing unit.

The outstanding Office Action also contends the claimed reserving unit is disclosed in column 10, lines 49-53 of Keshav. However, the claimed reserving unit is required to reserve a communication path for transferring data from this channel to another data transfer control device or the receiving node which is connected to the first physical network.

In contrast, column 10, lines 49-53 of Keshav merely describe a part of this client connection routine in which the routine waits for a subsequent message from the connection manager indicating that a connection with the requested remote server program has been established. Here, Keshav clearly refers to the same connection to the remote server program that is referred to in column 10, lines 26-29.

The outstanding Office Action's identification of this disclosure with the claimed reserving unit is therefore contradictory because the claimed reserving unit clearly refers to a communication path to the first physical network which is quite different from the channel in the second physical network established by the claimed establishing unit. Besides that, this

section of Keshav discloses no element of the data transfer control device connected with transmitting node, that reserves a communication path.

The outstanding Office Action states in section 19 that both receiving and sending network devices reserve a channel to communicate with one another. Applicants argue, however, that Keshav discloses no element like the claimed reserving unit that constitutes the data transfer control device connected with the transmitting node. The outstanding Office Action still fails to point out precisely which device disclosed in Keshav is equivalent to the data transfer control device and which element disclosed in Keshav is equivalent to the claimed reserving unit.

The outstanding Office Action contends the claimed commanding unit is disclosed in column 5, lines 58-64 of Keshav. However, the claimed commanding unit is required to command the transmission to the transmitting node using a protocol depending on the second physical network.

In contrast, column 5, lines 58-64 of Keshav merely describe that the application program A 400 communicates with a connection service routine library 405, using either inter-process communication within the processing unit or a connection between two suitably programmed circuits or devices within the processing system. In other words, this section of Keshav merely describes a communication that takes place within a single processing system 100. This section of Keshav discloses no element of the data transfer control device connected with the transmitting node, that commands the transmitting node to transmit the information data through the channel using a protocol depending on the second physical network, is obvious because Keshav does not refer to a connection described in column 10, and because Keshav does not refer to any network external to the processing system.

The outstanding Office Action states in section 20 that Keshav teaches a service routine which is analogous to a command, and the communication manager further communicates with an Internet protocol stack interface and an ATM protocol stack interface. Applicants argue, however, that Keshav discloses no element like the claimed commanding unit that constitutes the data transfer control device connected with the transmitting node. The outstanding Office Action still fails to point out precisely which device disclosed in Keshav is equivalent to the data transfer control device and which element disclosed in Keshav is equivalent to the claimed commanding unit.

Accordingly, in light of the above comments, it is respectfully submitted the apparatus claims patentably define over Keshav. Further, similar arguments apply to the corresponding method claims. Therefore, it is respectfully submitted each of the independent claims and the claims depending therefrom are allowable.



Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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